Amendments to the Claims

Please amend Claims 1, 4, and 7 through 9. The Claim Listing below will replace all prior versions of the claims in the application:

Claim Listing

1.   (Currently amended) A method of increasing network processing node interconnect capacity and reducing maximum hop count in a scalable multidimensional ring network by creating additional rings comprising the steps of:

(a) selecting a node identification algorithm;

(b) selecting an initial network processing node in the scalable multidimensional ring network as a first node in a new ring;

(c) applying the node identification algorithm to the selected node to calculate a subsequent node in the new ring;

(d) making the calculated node the selected node;

(e) [terminating the applying step when] repeating steps c-d until the selected node is the initial network processing node, thereby creating the new ring; and

(f) [terminating Step (b) when] repeating steps b-e until all nodes in the scalable multidimensional ring network have been processed according to steps (b) through (e), thereby creating all new rings in the scalable multidimensional ring network.

2.   (Original) The method of Claim 1 wherein the node identification algorithm identifies the subsequent network processing node based upon being one hop away bi-directionally in each of the X, Y and Z dimensions.

3. (Original) The method of Claim 1 wherein the node identification algorithm identifies the subsequent network processing node based upon characteristics of the network processing node comprising:

    network processing node type, network cabling type and distance, and physical location of the network processing node.

4. (Currently amended) An apparatus for increasing network processing node interconnect capacity and reducing maximum hop count in a scalable multidimensional ring network by creating additional rings comprising a processor, a memory and a network interface, the processor configured for <u>performing</u>:

    (a) selecting a node identification algorithm;

    (b) selecting an initial network processing node in the scalable multidimensional ring network as a first node in a new ring;

    (c) applying the node identification algorithm to the selected node to calculate a subsequent node in the new ring;

    (d) making the calculated node the selected node;

    (e) [terminating applying the node identification algorithm to the selected node to calculate a subsequent node in the new ring when] <u>repeating the performance of c-d until</u> the selected node is the initial network processing node, thereby creating the new ring; and

    (f) [terminating selecting an initial network processing node in the scalable multidimensional ring network as a first node in a new ring when] <u>repeating the performance of b-e until</u> all nodes in the scalable multidimensional ring network has been processed, thereby creating all new rings in the scalable multidimensional ring network.

5. (Original) The apparatus of Claim 4 wherein the node identification algorithm identifies the subsequent network processing node based upon being one hop away bi-directionally in each of the X, Y and Z dimensions.

6. (Original) The apparatus of Claim 4 wherein the node identification algorithm identifies the subsequent network processing node based upon characteristics of the network processing node comprising:

    network processing node type, network cabling type and distance, and physical location of the network processing node.

7. (Currently amended) An apparatus for increasing network processing node interconnect capacity and reducing maximum hop count in a scalable multidimensional ring network by creating additional rings comprising:

    (a) a means for selecting a node identification algorithm;

    (b) a means for selecting an initial network processing node in the scalable multidimensional ring network as a first node in a new ring;

    (c) a means for applying the node identification algorithm to the selected node to calculate a subsequent node in the new ring;

    (d) a means for making the calculated node the selected node;

    (e) a means for [terminating applying the node identification algorithm to the selected node to calculate a subsequent node in the new ring when] repeating the functions recited in c-d until the selected node is the initial network processing node, thereby creating the new ring; and

    (f) a means for [terminating selecting an initial network processing node in the scalable multidimensional ring network as a first node in a new ring when] repeating the functions recited in b-e until all nodes in the scalable multidimensional ring network has

been processed, thereby creating all new rings in the scalable multidimensional ring network.

8.   (Currently amended) A computer program product comprising:

a computer usable medium for increasing network processing node interconnect capacity and reducing maximum hop count in a scalable multidimensional ring network by creating additional rings; and

a set of computer program instructions embodied on the computer usable medium, including instructions to:

a) select a node identification algorithm;

b) select an initial network processing node in the scalable multidimensional ring network as a first node in a new ring;

c) apply the node identification algorithm to the selected node to calculate a subsequent node in the new ring;

d) make the calculated node the selected node;

e) [terminate the apply the node identification algorithm instructions when] repeat c-d until the selected node is the initial network processing node, thereby creating the new ring; and

f) [terminate the select an initial network processing node instructions when] repeat b-e until all nodes in the scalable multidimensional ring network has been processed, thereby creating all new rings in the scalable multidimensional ring network.

9.   (Currently amended) A computer data signal embodied in a carrier wave comprising a code segment for increasing network processing node interconnect capacity and reducing

maximum hop count in a scalable multidimensional ring network by creating additional rings; and

a set of computer program instructions embodied in the code segment, including instructions to:

(a) select a node identification algorithm;

(b) select an initial network processing node in the scalable multidimensional ring network as a first node in a new ring;

(c) apply the node identification algorithm to the selected node to calculate a subsequent node in the new ring;

(d) make the calculated node the selected node;

(e) [terminate the apply the node identification algorithm instructions when] repeat c-d until the selected node is the initial network processing node, thereby creating the new ring; and

(f) [terminate the select an initial network processing node instructions when] repeat b-e until all nodes in the scalable multidimensional ring network has been processed, thereby creating all new rings in the scalable multidimensional ring network.